

Abstract

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10. A vector comprising the DNA of Claim 2.

11. A host cell comprising the vector of Claim 10.

12. A process for producing a polypeptide comprising: expressing from the host cell of Claim 11 the polypeptide encoded by said DNA.

13. A process for producing a cell which expresses a polypeptide comprising genetically engineering the cell with the vector of Claim 10.

14. A polypeptide comprising a member selected from the group consisting of:

- (a) a polypeptide having an amino acid sequence set forth in SEQ ID NO:2;
- (b) a polypeptide comprising amino acid 1 to amino acid 167 of SEQ ID NO:2; and
- (c) a polypeptide which is at least 70% identical to the polypeptide of (a) or (b).

15. The polypeptide of Claim 14 wherein the polypeptide comprises amino acid -22 to amino acid 167 of SEQ ID NO:2.

16. The polypeptide of Claim 14 wherein the polypeptide comprises amino acid 1 to amino acid 167 of SEQ ID NO:2.

17. A compound which inhibits activation of the polypeptide of claim 14.

18. A compound which activates the polypeptide of claim 14.

19. A method for the treatment of a patient having need of hHSP comprising: administering to the patient a therapeutically effective amount of the polypeptide of claim 14.

20. The method of Claim 19 wherein said therapeutically effective amount of the polypeptide is administered by providing to the patient DNA encoding said polypeptide and expressing said polypeptide *in vivo*.

21. A method for the treatment of a patient having need to inhibit a hHSP polypeptide comprising: administering to the patient a therapeutically effective amount of the compound of Claim 17.

22. A process for diagnosing a disease or a susceptibility to a disease related to an under-

expression of the polypeptide of claim 14 comprising:

determining a mutation in a nucleic acid sequence encoding said polypeptide.

23. A diagnostic process comprising:

analyzing for the presence of the polypeptide of claim 14 in a sample derived from a host.

24. A method for identifying compounds which inhibit or enhance activation of the polypeptide of claim 14 comprising: contacting a cell expressing on the surface thereof a receptor for the polypeptide, said receptor being associated with a second component capable of providing a detectable signal in response to the binding of a compound to said receptor, with an analytically detectable hHSP polypeptide and a compound under conditions to permit binding to the receptor; and

determining whether the compound inhibits or enhances the receptor by detecting the absence of a signal generated from the interaction of the hHSP with the receptor.

25. An isolated antibody or fragment thereof that specifically binds to a protein selected from the group consisting of:

(a) a protein consisting of amino acid residues (-)22 to 167 of SEQ ID NO:2;

(b) a protein consisting of amino acid residues 1 to 167 of SEQ ID NO:2;

(c) a protein consisting of a portion of SEQ ID NO:2, wherein said portion comprises at least 30 contiguous amino acid residues of SEQ ID NO:2; and

(d) a protein consisting of a portion of SEQ ID NO:2, wherein said portion comprises at least 50 contiguous amino acid residues of SEQ ID NO:2.

26. The antibody or fragment thereof of claim 25 that specifically binds protein (a).

27. The antibody or fragment thereof of claim 25 that specifically binds protein (b).

28. The antibody or fragment thereof of claim 25 that specifically binds protein (c).

29. The antibody or fragment thereof of claim 25 that specifically binds protein (d).

30. The antibody or fragment thereof of claim 26 that specifically binds protein (b).

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31. The antibody or fragment thereof of claim 27 wherein said protein bound by said antibody or fragment thereof is glycosylated.

32. The antibody or fragment thereof of claim 27 which is a human antibody.

33. The antibody or fragment thereof of claim 27 which is a polyclonal antibody.

34. The antibody or fragment thereof of claim 27 which is a monoclonal antibody.

35. The antibody or fragment thereof of claim 27 which is selected from the group consisting of:

- (a) a chimeric antibody;
- (b) a humanized antibody;
- (c) a single chain antibody;
- (d) a Fab fragment;

36. The antibody or fragment thereof of claim 27 which is labeled.

37. The antibody of claim 36 wherein the label is selected from the group consisting of:

- (a) an enzyme;
- (b) a fluorescent label; and
- (c) a radioisotope.

38. The antibody or fragment thereof of claim 27 wherein said antibody specifically binds to said protein in a Western blot.

39. The antibody or fragment thereof of claim 27 wherein said antibody specifically binds to said protein in an ELISA.

40. An isolated cell that produces the antibody or fragment thereof of claim 27.

41. A hybridoma that produces the antibody or fragment thereof of claim 27.

42. A method of detecting hHSP protein in a biological sample comprising:

(a) contacting a biological sample with the antibody or fragment thereof of claim 27; and

(b) detecting the hHSP protein in the biological sample.

43. The method of claim 42 wherein the antibody or fragment thereof is a polyclonal antibody.

44. An isolated antibody or fragment thereof obtained from an animal that has been immunized with a protein selected from the group consisting of:

(a) a protein comprising the amino acid sequence of amino acid residues (-)22 to 167 of SEQ ID NO:2;

(b) a protein comprising the amino acid sequence of amino acid residues 1 to 167 of SEQ ID NO:2;

(c) a protein comprising the amino acid sequence of at least 30 contiguous amino acid residues of SEQ ID NO:2; and

(d) a protein comprising the amino acid sequence of at least 50 contiguous amino acid residues of SEQ ID NO:2;

wherein said antibody or fragment thereof specifically binds to said amino acid sequence.

45. The antibody or fragment thereof of claim 44 obtained from an animal immunized with protein (a).

46. The antibody or fragment thereof of claim 44 obtained from an animal immunized with protein (b).

47. The antibody or fragment thereof of claim 44 obtained from an animal immunized with protein (c).

48. The antibody or fragment thereof of claim 44 obtained from an animal immunized with protein (d).

49. The antibody or fragment thereof of claim 44 which is a monoclonal antibody.

50. The antibody or portion thereof of claim 44 which is selected from the group consisting of:

- (a) a chimeric antibody;
- (b) a polyclonal antibody;
- (c) a humanized antibody;
- (d) a single chain antibody; and
- (e) a Fab fragment.

51. An isolated antibody or fragment thereof that specifically binds to a protein selected from the group consisting of:

(a) a protein consisting of the full-length polypeptide encoded by the cDNA contained in ATCC Deposit Number 97455;

(b) a protein consisting of the mature form of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97455;

(c) a protein consisting of a portion of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97455, wherein said portion comprises at least 30 contiguous amino acid residues of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97455; and

(d) a protein consisting of a portion of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97455, wherein said portion comprises at least 50 contiguous amino acid residues of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97455.

52. The antibody or fragment thereof of claim 51 that specifically binds protein (a).

53. The antibody or fragment thereof of claim 51 that specifically binds protein (b).

54. The antibody or fragment thereof of claim 51 that specifically binds protein (c).

55. The antibody or fragment thereof of claim 51 that specifically binds protein (d).

56. The antibody or fragment thereof of claim 52 that specifically binds protein (b).

57. The antibody or fragment thereof of claim 53 wherein said protein bound by said antibody or fragment thereof is glycosylated.

69. The method of claim 68 wherein the antibody or fragment thereof is a polyclonal antibody.

70. An isolated antibody or fragment thereof obtained from an animal that has been immunized with a protein selected from the group consisting of:

- (a) a protein comprising the amino acid sequence of the full-length polypeptide encoded by the cDNA contained in ATCC Deposit Number 97455;
- (b) a protein comprising the amino acid sequence of the mature form of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97455;
- (c) a protein comprising the amino acid sequence of at least 30 contiguous amino acid residues of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97455; and
- (d) a protein comprising the amino acid sequence of at least 50 contiguous amino acid residues the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97455;

wherein said antibody or fragment thereof specifically binds to said amino acid sequence.

71. The antibody or fragment thereof of claim 70 obtained from an animal immunized with protein (a).

72. The antibody or fragment thereof of claim 70 obtained from an animal immunized with protein (b).

73. The antibody or fragment thereof of claim 70 obtained from an animal immunized with protein (c).

74. The antibody or fragment thereof of claim 70 obtained from an animal immunized with protein (d).

75. The antibody or fragment thereof of claim 70 which is a monoclonal antibody.

76. The antibody or portion thereof of claim 70 which is selected from the group consisting of:

- (a) a chimeric antibody;

- (b) a polyclonal antibody;
- (c) a humanized antibody;
- (d) a single chain antibody; and
- (e) a Fab fragment.

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